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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/705,591

11/10/2003

Jeong-hwan Lee

SWO-0002

6244

23413 7590 08/19/2005

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EXAMINER

HAN, JASON

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

APW

<b>Office Action Summary</b>	Application No. 10/705,591	Applicant(s) LEE ET AL.	
	Examiner Jason M. Han	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Specification*

2. The disclosure is objected to because of the following informalities:
  - a. Page 10, Line 17: Grammatical error – “another sheets” should read as “other sheets”;Appropriate correction is required.

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The following claims have been rejected in light of the specification, but rendered the broadest interpretation as construed by the examiner [MPEP 2111].

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### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4-5, 9-10, 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Hira et al. (U.S. Patent 5961198).
5. With regards to Claim 1, Hira discloses a reflector for a backlight assembly for use in an LCD device including:

- A base film [Figure 13: (19)];
  - A protrusion [Figure 12: (10)] provided on a first surface of the base film; and
  - A reflecting layer [Figure 13: (11)] deposited on the base film and the protrusion, for reflecting light generated from a lamp.
6. With regards to Claim 4, Hira discloses the protrusion being embossed on the base film [Figure 13].
7. With regards to Claim 5, Hira discloses the reflector including a plurality of protrusions having a dotted pattern [Figures 2, 12, 13].
8. With regards to Claim 9, Hira discloses a light guide plate [Figure 13: (2)] disposed on the reflector; and a lamp unit [Figure 13: (1)] disposed at a side of the light guide plate, for emitting light into the light guide plate.
9. With regards to Claim 10, Hira discloses a plurality of prism teeth [Figures 2, 5, 12: (10)] being formed on a surface of the light guide plate facing the reflector.
10. With regards to Claim 12, Hira discloses an interval between the adjacent protrusions on the base film varying in inverse proportion to a distance between the protrusions and the lamp unit [Columns 5-6: Table 1].
11. With regards to Claim 13, Hira discloses an optical sheet layer being disposed on the light guide plate, whereby the optical sheet layer has a plurality of prism teeth on a surface thereof facing the light guide plate [Figure 1: (4, 5); Column 3, Lines 21-28].
12. With regards to Claim 14, Hira discloses the prism teeth of the light guide plate [Figures 9-11: (10)] being arranged in a direction across the prism teeth of the optical sheet layer [Column 3, Lines 21-28, 44-49].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 2-3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hira et al. (U.S. Patent 5961198).

14. With regard to Claims 2-3, Hira discloses the claimed invention as cited above, but does not specifically teach the protrusion being made of an elastic material (re: Claim 2), nor being made of silicon resin (re: Claim 3).

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the protrusion out of an elastic material such as silicon resin, since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. In this case, providing the protrusion with an elastic material [e.g., silicon resin] would provide further protection to the reflecting film [Column 10, Lines 10-15], as well as the device.

15. With regards to Claim 11, Hira discloses the claimed invention as cited above, but does not specifically teach the protrusion of the reflector having a diameter smaller than a pitch of the prism teeth of the light guide plate.

However, it would have been ~~an~~ obvious to one having ordinary skill in the art to change the size of the protrusion such that the diameter is smaller than a pitch of the

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prism teeth of the light guide plate, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). In this case, adjusting/modifying the size of the protrusions would permit for a desired optical effect (reflectance) on the illumination.

16. Claims 6-8 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hira et al. (U.S. Patent 5961198) as applied to Claims 1 and 9, respectively above, and further in view of Yang et al. (U.S. Patent 6151089).

17. With regards to Claims 6-8 and 15, Hira discloses the claimed invention as cited above, but does not specifically teach the reflector including a deformation prevention part for preventing the base film from being deformed, whereby the deformation prevention part is formed on a second surface of the base film opposite to the first surface (re: Claims 6 and 15); wherein the deformation prevention part is embossed on the second surface of the base film (re: Claim 7); nor teaches the reflector including a plurality of the deformation prevention parts having a dotted pattern (re: Claim 8).

Yang teaches a reflector [Figure 2: (8)] including a base film [Figure 2: (15)], whereby a plurality of deformation prevention parts [Figure 2: (12)] in the form of a dotted pattern is provided/embossed on a second surface of the base film opposite to a first surface so as to prevent the film from being deformed [Column 6, Lines 13-40].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the reflector of Hira to incorporate the deformation prevention parts

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of Yang in order to provide further protection to the shape of the reflecting film [see Hira: Column 10, Lines 10-15], as well as the base film from deforming.

18. With regards to Claim 16, Hira in view of Yang discloses the claimed invention as cited above. In addition, Hira teaches a plurality of prism teeth [Figures 2, 5, 12: (10)] being formed on a surface of the light guide plate facing the reflector.

19. With regards to Claim 17, Hira in view of Yang discloses the claimed invention as cited above, but does not specifically teach the protrusion of the reflector having a diameter smaller than a pitch of the prism teeth of the light guide plate.

However, it would have been ~~an~~ obvious to one having ordinary skill in the art to change the size of the protrusion such that the diameter is smaller than a pitch of the prism teeth of the light guide plate, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). In this case, adjusting/modifying the size of the protrusions would permit for a desired optical effect (reflectance) on the illumination.

20. With regards to Claim 18, Hira in view of Yang discloses the claimed invention as cited above. In addition, Hira teaches an interval between the adjacent protrusions on the base film varying in inverse proportion to a distance between the protrusions and the lamp unit [Columns 5-6: Table 1].

21. With regards to Claim 19, Hira in view of Yang discloses the claimed invention as cited above. In addition, Hira teaches an optical sheet layer being disposed on the light

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guide plate, whereby the optical sheet layer has a plurality of prism teeth on a surface thereof facing the light guide plate [Figure 1: (4, 5); Column 3, Lines 21-28].

22. With regards to Claim 20, Hira in view of Yang discloses the claimed invention as cited above. In addition, Hira teaches the prism teeth of the light guide plate [Figures 9-11: (10)] being arranged in a direction across the prism teeth of the optical sheet layer [Column 3, Lines 21-28, 44-49].

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art pertinent to the current application, but are not considered exhaustive:

US Patent 5775791 to Yoshikawa et al;

US Publication 2003/0025852 to Ishitake;

US Patent 6705739 to Kuo;

US Patent 6724529 to Sinkoff.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMH (8/9/2005)

  
Stephen Husar  
Primary Examiner